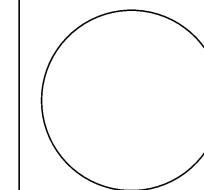


PROJECT LOCATION

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034

PROJECT LOCATION MAP

WASTEWATER CONVEYANCE SYSTEM

HONEY CREEK STATE PARK

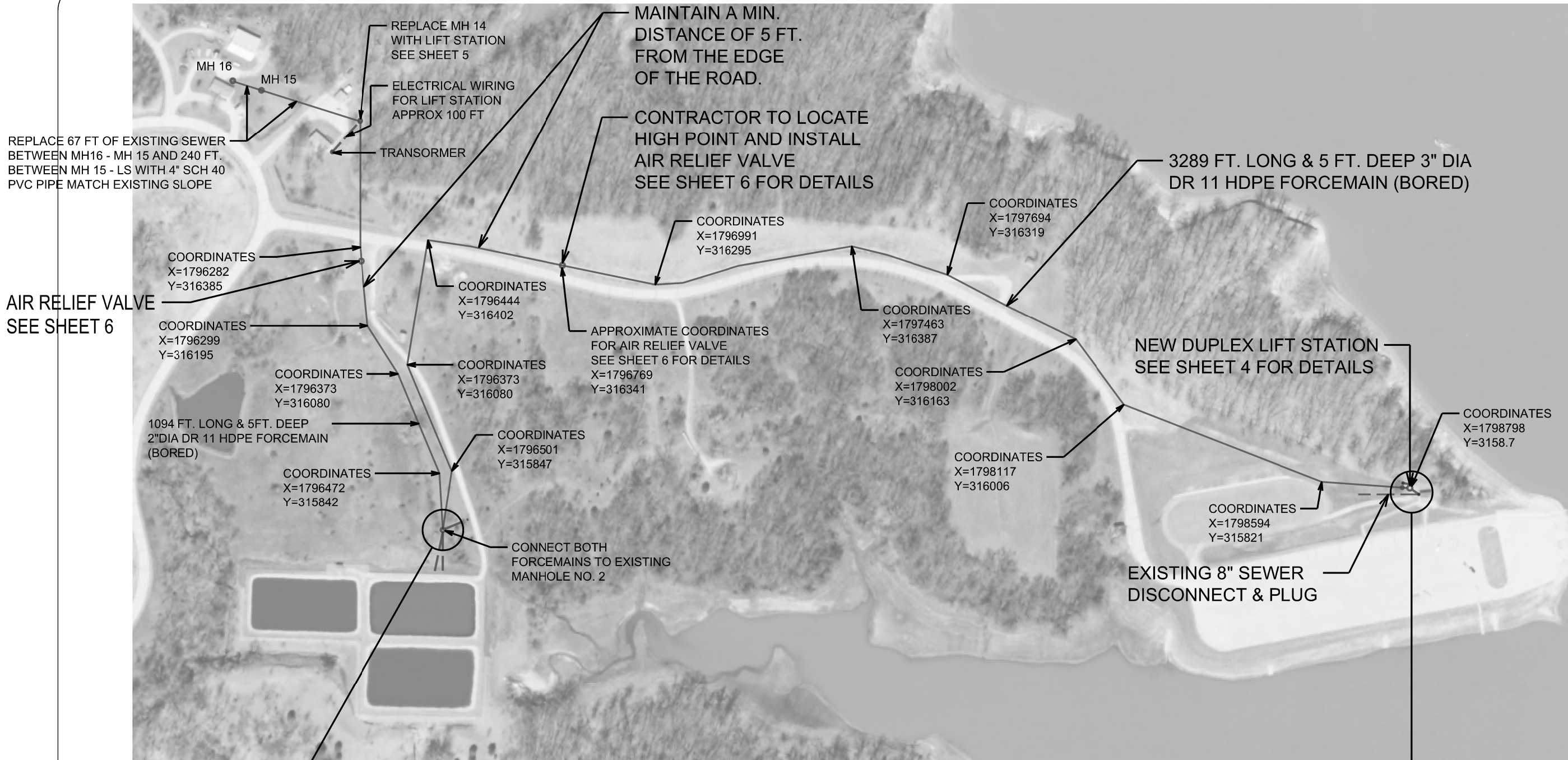
APPANOOSE COUNTY, IOWA

| NO. | BY | REVISION |
|-----|----|----------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

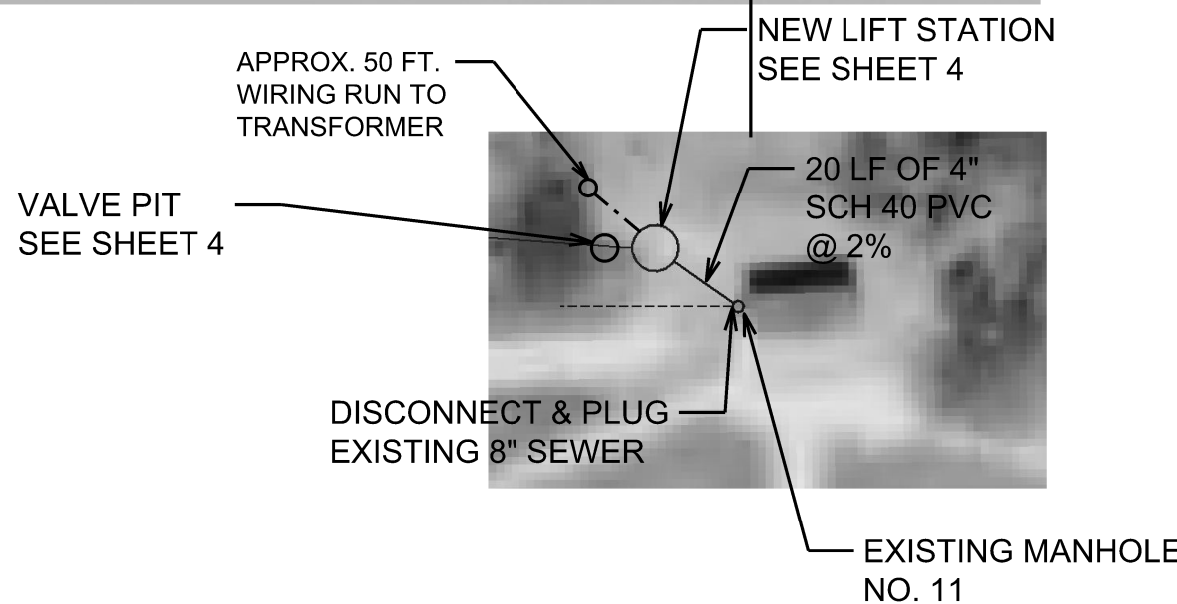
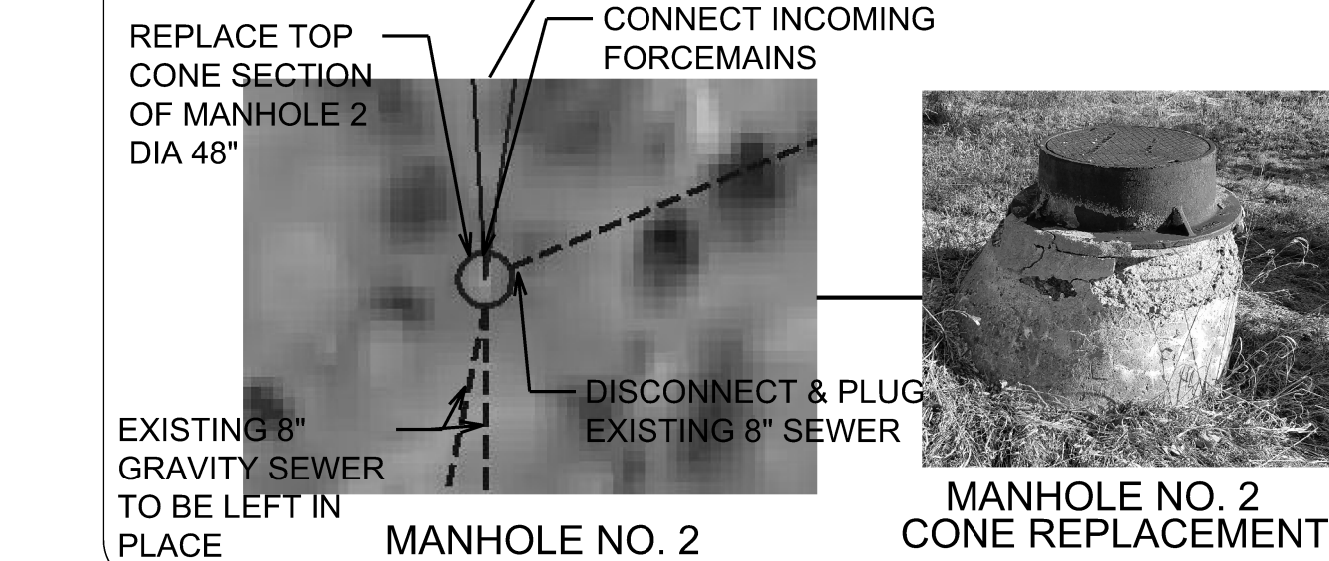
DRAWN BY: PROJECT NUMBER:
20-05-04-06

CHK'D BY: DATE:

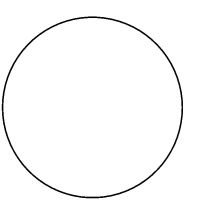
SHEET No:



AIR RELIEF VALVE SEE SHEET 6



CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES
 ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034

PROJECT LAYOUT
 WASTEWATER CONVEYANCE SYSTEM
HONEY CREEK STATE PARK
 APPANOOSE COUNTY, IOWA

| NO. | BY | DATE | REVISION |
|-----|----|------|----------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

DRAWN BY: PROJECT NUMBER: 20-05-04-06
 CHK'D BY: DATE:

DUPLEX STATION

FURNISHED BY CONTRACTOR:

- 2 - "BARNES" MODEL SGVF2022L, 2 HP, 230/1 HEAVY DUTY SUBMERSIBLE GRINDER PUMPS (OR APPROVED EQUAL) COMPLETE WITH
 - 30' OF POWER CORD
 - 2 HP, 230/1 SUBMERSIBLE MOTOR
 - STAINLESS STEEL LIFTING CHAIN

EZ OUT RAIL SYSTEM INCLUDING:

- 2 - "BARNES" MODEL BAF-1220, 2" BASE ELBOW WITH BREAKAWAY FITTING
- 2 - UPPER GUIDE BRACKET
- 2 - SETS OF 1" STAINLESS STEEL GUIDE PIPE FOR THE GUIDE SYSTEM
- 4 - FLOAT SWITCHES WITH 30' CORDS

1 - BARNES CONTROL PANEL COMPLETE AS FOLLOWS:

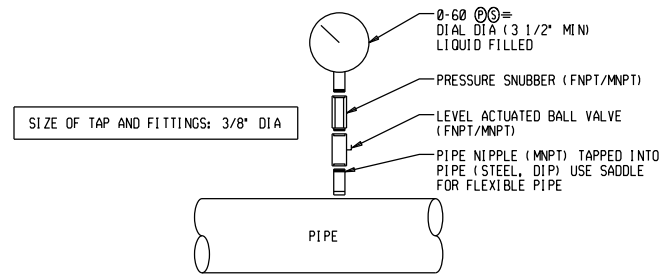
- (PUMP & CONTROL PANEL WILL BE BY THE SAME MANUFACTURER)
- NEMA 4X ENCLOSURE
- FLASHING HIGHWATER ALARM LIGHT AND HORN
- PADLOCK PROVISION
- CIRCUIT BREAKERS
- HP RATED CONTACTOR
- DUPLEX PUMP CONTROLLER WITH TERMINALS
- ALTERNATING RELAY
- H-O-A SWITCHES
- RUN LIGHTS
- LIGHTNING SUPPRESSORS
- SWING DEAD INNER DOOR
- ELAPSED TIME METERS
- SEAL FAILURE CIRCUIT AND INDICATION
- ANTI-CONDENSATION HEATER
- UL LABEL

1 - START-UP AND TRAINING

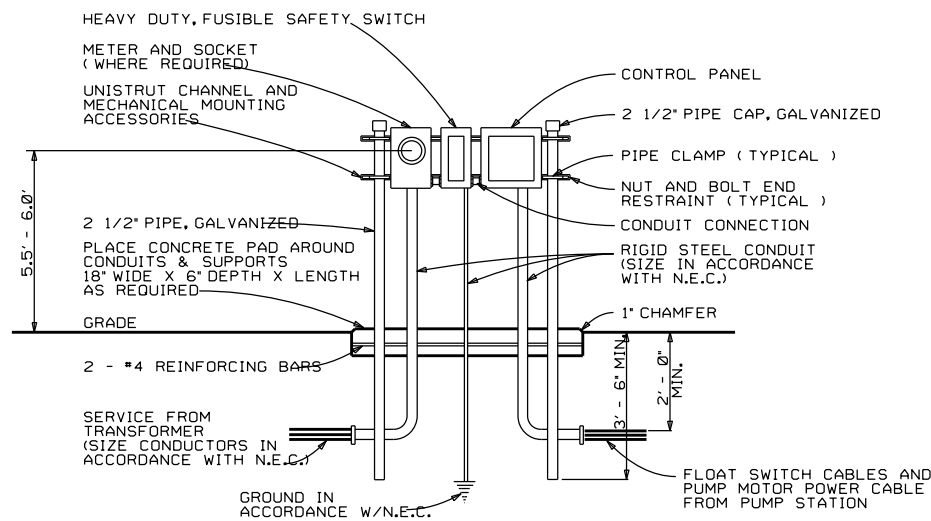
- 1 - U.S. FOUNDRY ALUMINUM ACCESS HATCH FOR LIFT STATION, 30" X 48" DUPLEX, 300 PSF, BITUMINOUS PAINT AND HOLD OPEN HANDLE
- 1 - U.S. FOUNDRY ALUMINUM ACCESS HATCH FOR VALVE BOX, 24" X 30" SIMPLEX, 300 PSF, BITUMINOUS PAINT AND HOLD OPEN HANDLE

FURNISHED BY CONTRACTOR:

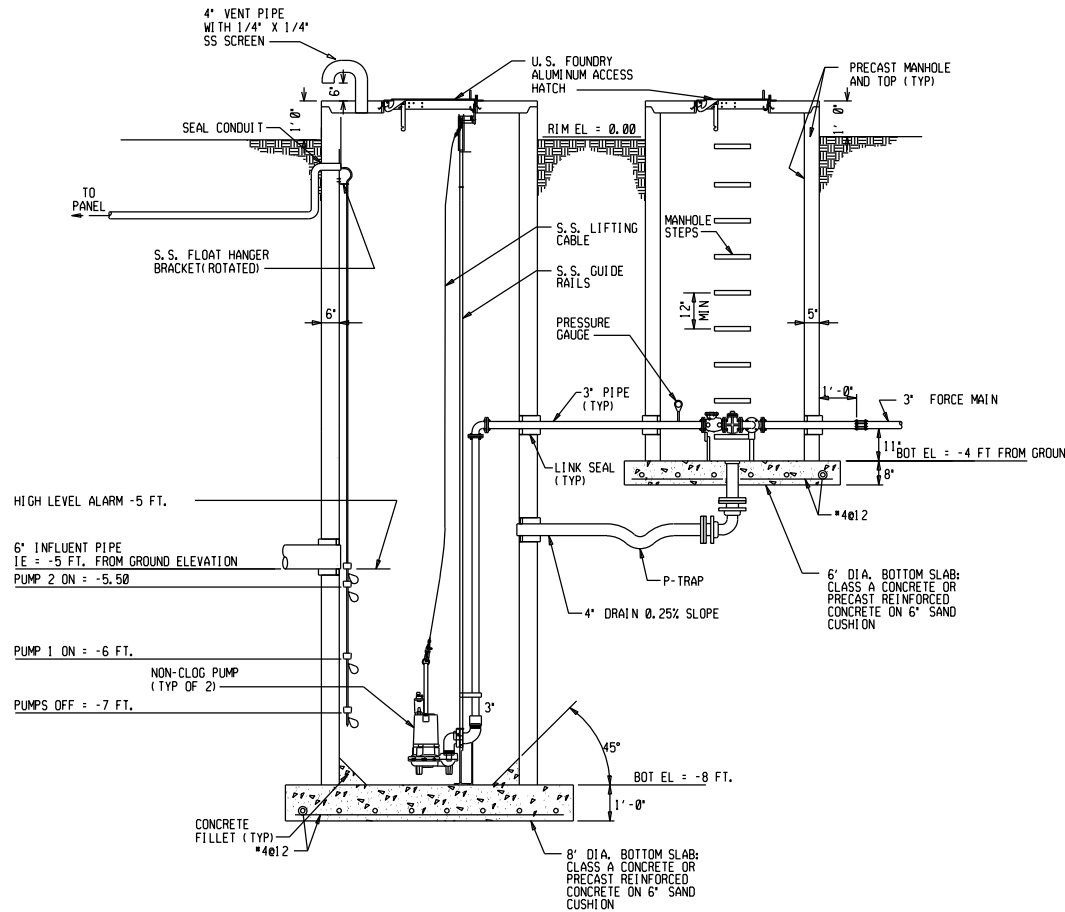
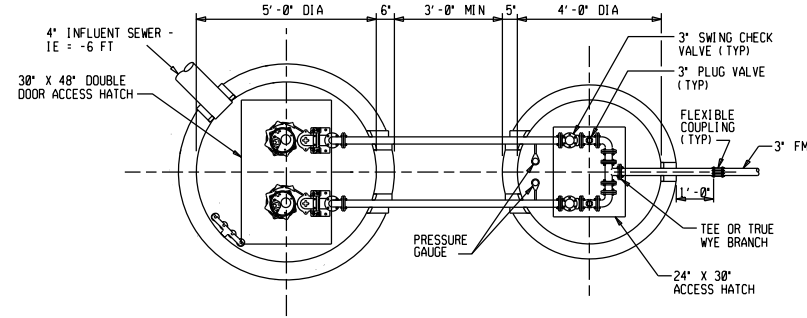
- 1 - PRECAST CONCRETE WET WELL AND TOP WITH CAST-IN-PLACE (OR PRECAST) BASE
- 1 - PRECAST CONCRETE VALVE VAULT AND TOP WITH CAST-IN-PLACE (OR PRECAST) BASE
- 2 - PLUG VALVES, 3", CAST OR DUCTILE IRON
- 2 - CHECK VALVES, 3", CAST OR DUCTILE IRON
- 1 - ALL PIPING, COUPLINGS, ELBOWS, ETC. ABOVE BASE ELBOW - SCH 40 GALVANIZED STEEL PIPE OR SCH 80 PVC
- 1 - PIPE AND FITTINGS FOR VALVE VAULT DRAIN TO WET WELL
- 1 - PIPE AND FITTINGS FOR WET WELL VENT
- 2 - PRESSURE GAUGES AND FITTINGS



Gauge Installation Detail
NOT TO SCALE

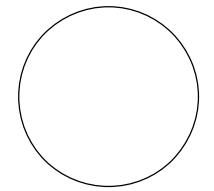


Standard Pump Station Control Pedestal
NOT TO SCALE



Duplex Pump Station
NOT TO SCALE

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034

BOAT RAMP LIFT STATION DETAILS

WASTEWATER CONVEYANCE SYSTEM

HONEY CREEK STATE PARK

APPANOOSE COUNTY, IOWA

NO. BY REVISION

DATE

DRAWN BY: PROJECT NUMBER:

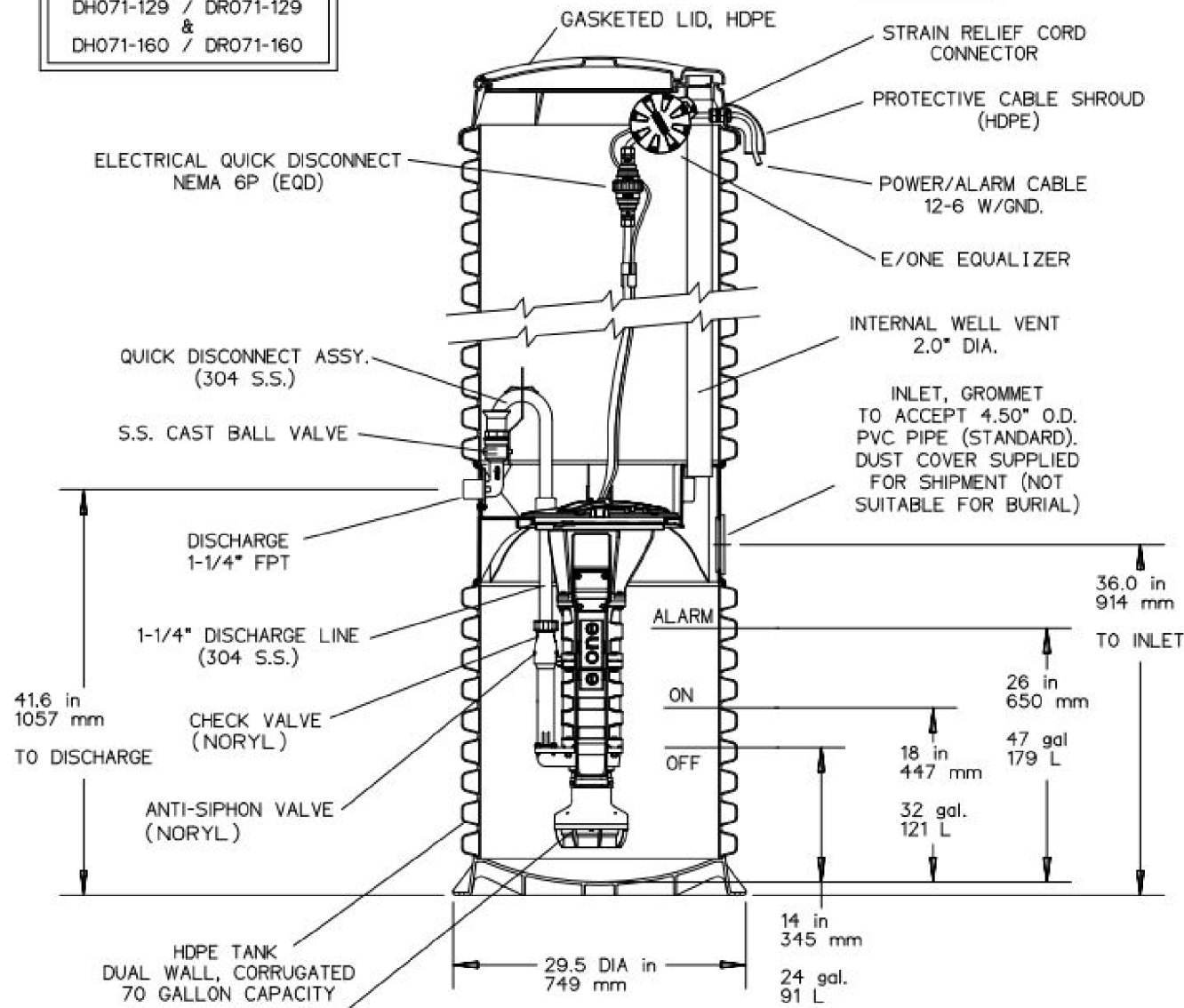
20-05-04-06

CHK'D BY: DATE:

SHEET No:

OPTIONS : **DH071** (HARD WIRED LEVEL CONTROLS)
 DR071 (WIRELESS LEVEL CONTROLS)

FIELD JOINT REQUIRED FOR MODELS
DH071-129 / DR071-129
&
DH071-160 / DR071-160



SEMI-POSITIVE DISPLACEMENT TYPE PUMP. EACH DIRECTLY DRIVEN BY A 1 HP MOTOR



| | | | | |
|-------|-------|----------|-------|-------|
| AD | CH | 10/20/10 | E | |
| DR BY | CHK'D | DATE | ISSUE | SCALE |

CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTION FOR DETAILS

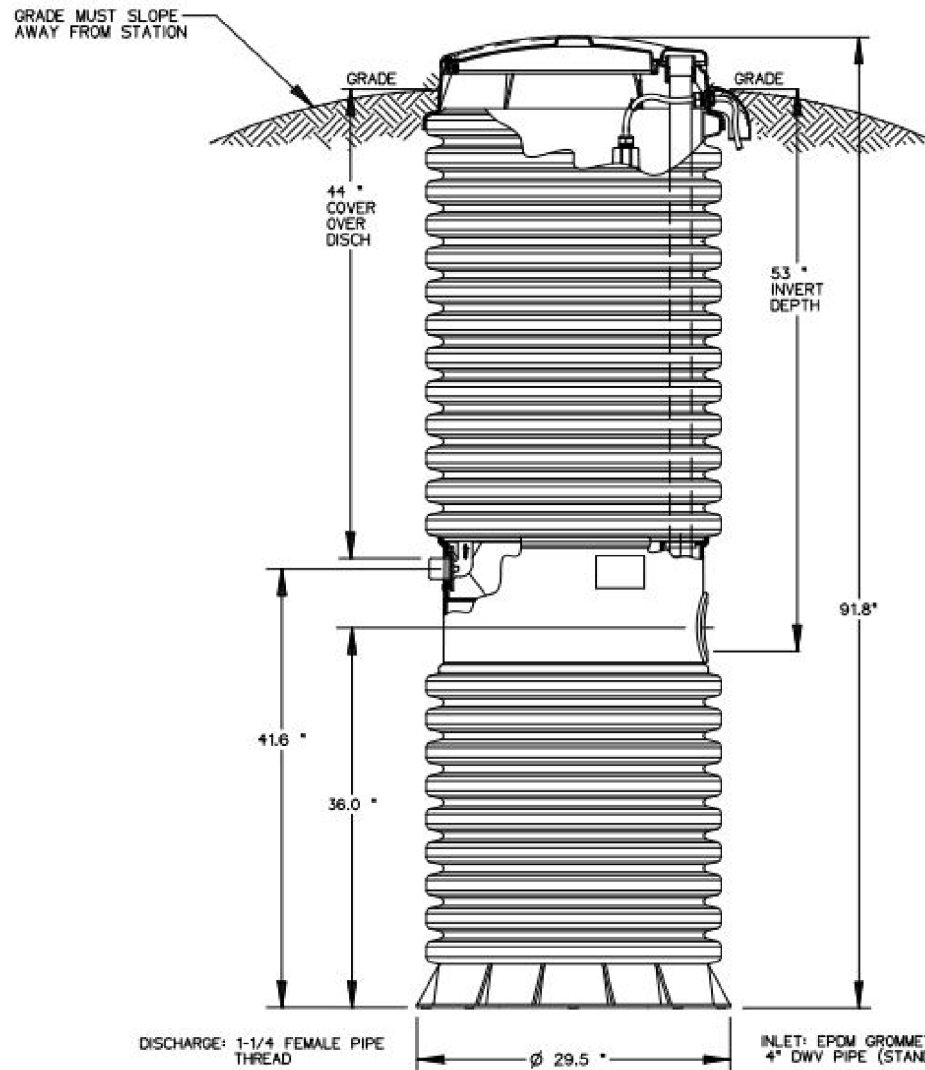


MODEL DH071 / DR071
DETAIL SHEET

NOTE: DIMENSIONS ARE FOR REF ONLY

NA0050P02

OPTIONS : **DH071-93** (HARD WIRED LEVEL CONTROLS)
 DR071-93 (WIRELESS LEVEL CONTROLS)



CONCRETE BALLAST MAY BE REQUIRED SEE INSTALLATION INSTRUCTIONS FOR DETAILS

NOTE: DIMENSIONS ARE FOR REF ONLY



| | | | | |
|-------|-------|----------|-------|-------|
| AD | CAH | 07/12/07 | B | 1/16 |
| DR BY | CHK'D | DATE | ISSUE | SCALE |

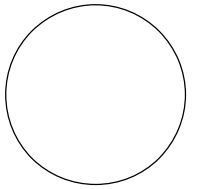


MODEL DH071-93 / DR071-93

NA0050P06

NOTE:
FOR CONTROLS
SEE SHEET 6

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034

RESIDENCE LIFT STATION

WASTEWATER CONVEYANCE SYSTEM

HONEY CREEK STATE PARK

APPANOOSE COUNTY, IOWA

NO. BY REVISION

DATE

DATE

DATE

DATE

DATE

DATE

DATE

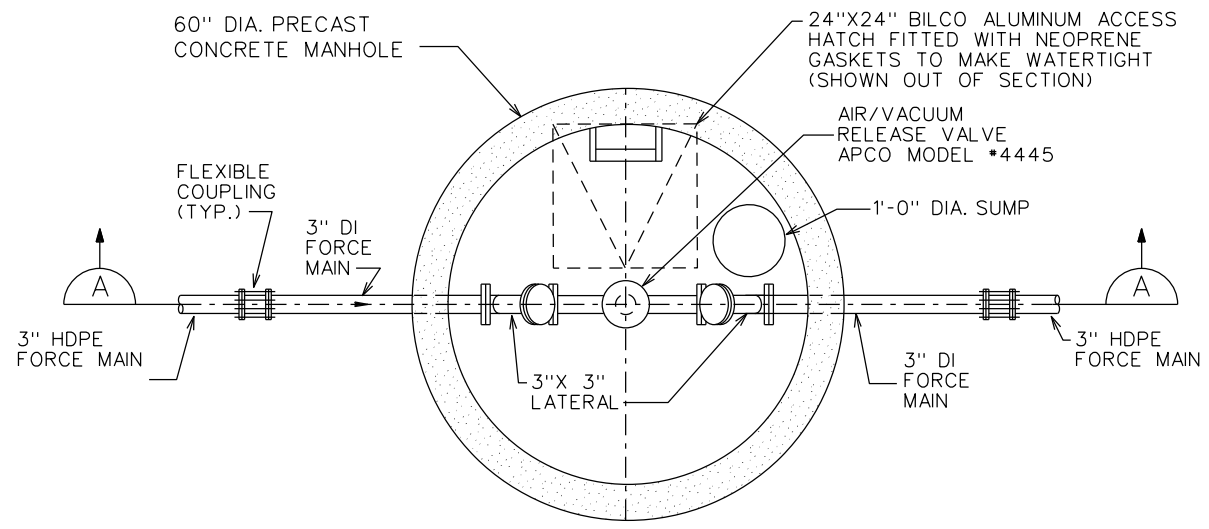
PROJECT NUMBER:

20-05-04-06

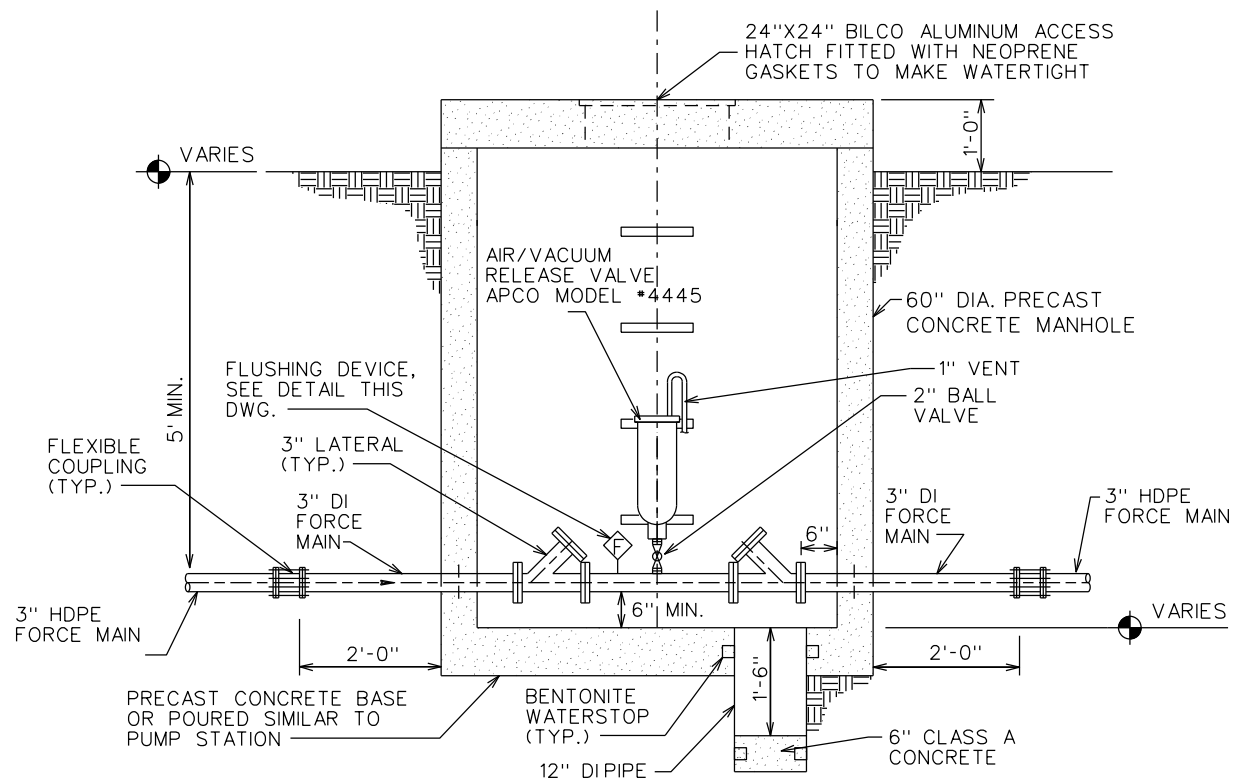
CHK'D BY: DATE:

DATE:

SHEET NO:



PLAN



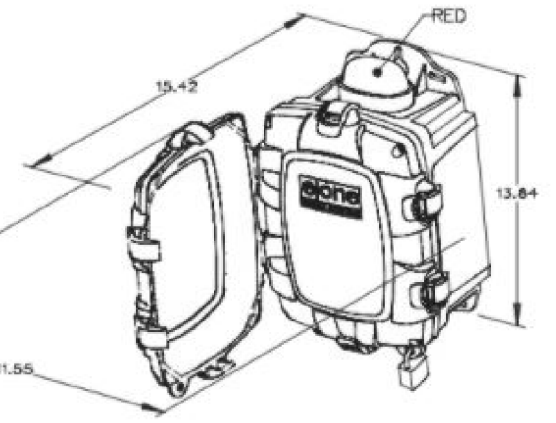
SECTION A

AIR RELEASE MANHOLE

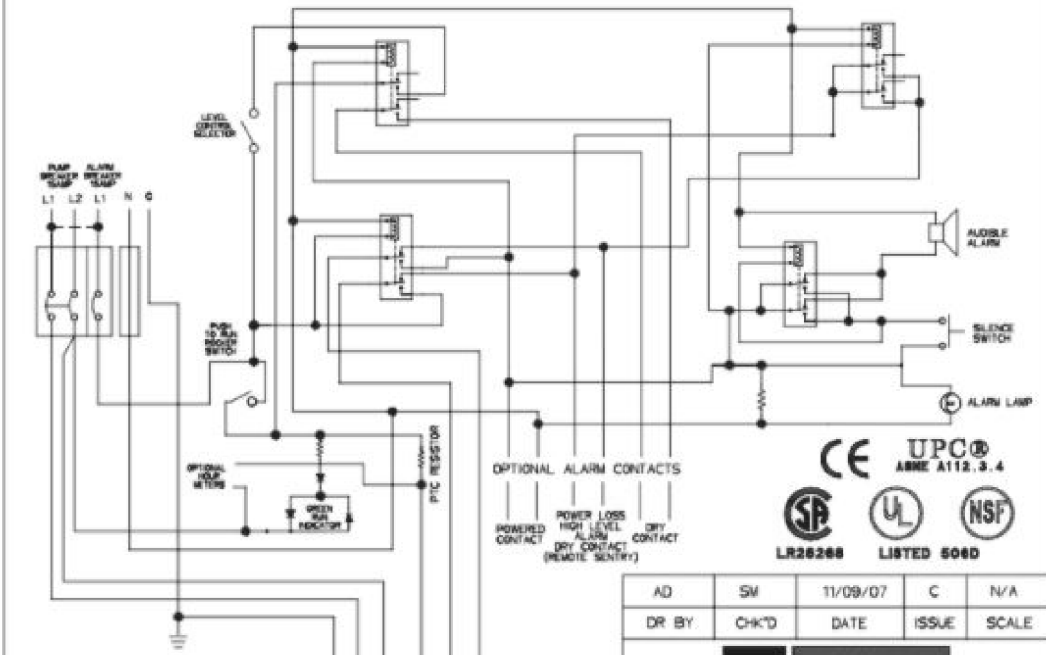
NOT TO SCALE

SIMPLEX SENTRY

- REDUNDANT RUN (HIGH LEVEL)
- EXTERNAL VISUAL & AUDIBLE ALARM
- EXTERNAL LATCHING MANUAL SILENCE
- MANUAL RUN
- PUMP RUN INDICATOR
- CONFORMAL COATED CIRCUIT BOARD
- PADLOCK
- NEMA 4X ENCLOSURE ASSEMBLY
- CORROSION PROOF THERMOPLASTIC POLYESTER APPROVED BY UL FOR ELECTRICAL CONTROL ENCLOSURE



- OPTIONS:
- ALARM CONTACTS
 - HOUR METER



| PIN | FUNCTION | 2000S | EXTREME |
|-----|--------------|--------|---------------|
| 1 | MANUAL RUN | RED | BROWN |
| 2 | L1 | BLACK | RED |
| 3 | L2 | WHITE | BLACK |
| 4 | OND | GREEN | ORANGE/YELLOW |
| 5 | ALARM FEED | ORANGE | YELLOW |
| 6 | ALARM RETURN | BLUE | BLUE |

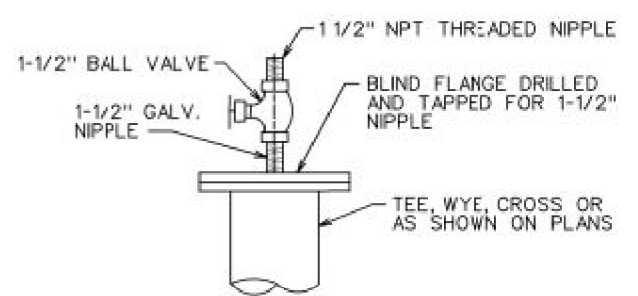
CONTROL CABLE:
TYPE TC DIRECT BURIAL, 12AWG,
SIX CONDUCTOR

| | | | | |
|-------|-------|----------|-------|-------|
| AD | SM | 11/09/07 | C | N/A |
| DR BY | CHK'D | DATE | ISSUE | SCALE |



SIMPLEX SENTRY, 240V 60Hz.
DOUBLE POLE POWER

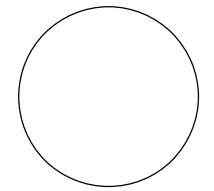
LM000326



FLUSHING DEVICE

NOT TO SCALE

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034

AIR RELIEF MANHOLE & ALARM PANEL

WASTEWATER CONVEYANCE SYSTEM

HONEY CREEK STATE PARK

APPANOOSE COUNTY, IOWA

| NO. | BY | REVISION |
|-----|----|----------|
| | | |
| | | |
| | | |
| | | |
| | | |

DRAWN BY: PROJECT NUMBER:
20-05-04-06

CHK'D BY: DATE:

SHEET No:

